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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,259	03/15/2007	Michael Anthony Pugel	PU040064	1726

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EXAMINER

SALCE, JASON P

ART UNIT	PAPER NUMBER
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2421

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/549,259	Applicant(s) PUGEL ET AL.	
	Examiner Jason P. Salce	Art Unit 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(c)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/08/2010 has been entered.

Response to Arguments

Applicant's arguments filed 11/8/2010 have been fully considered but they are not persuasive.

The Examiner agrees with the arguments presented by Applicant in regards to the double patenting rejection.

Applicant argues that Ho fails to teach any detection of an available frequency band on the transmission medium and that Ho only discloses at Column 9, Lines 36-39 that the video signal is converted to an unoccupied channel. The Examiner respectfully disagrees.

The Examiner notes that identifying an unoccupied frequency is equivalent to detection of an available frequency. In order for Ho to transmit the signal over the

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unoccupied frequency, Ho must at some point detect that the unoccupied frequency is available. Whether this is performed at the point of transmission or prior to transmission, the signal cannot be transmitted unless Ho knows that the specific frequency (**unoccupied**) is to be used for transmission.

Applicant had further amended the claim to recite “dynamically”, wherein the Examiner added Williams to specifically teach the method of detection used to determine an unoccupied/available frequency. Applicant argues that Williams fails to teach dynamically detecting an available frequency band on a transmission medium and notes that Column 11, Lines 45-48 teaches scanning terrestrial signals to determine which frequencies to use as carrier frequencies for the selected ones of the transmodulated signals. The Examiner respectfully disagrees.

The Examiner notes that Column 11, Lines 40-64 teaches that the system dynamically/automatically detects available frequency bands by checking the power level of the transmission channels (**on a terrestrial transmission medium**) and if the frequency band is available for transmission, transmitting signals through the available channel. Therefore by modifying the detection of unoccupied frequency bands, as taught by Ho, using the dynamically detection of an available frequency, as taught by Williams, Ho would benefit from the teachings of Williams by demonstrating how to propagate remodulating existing signals on the same transmission channel in an efficient manner (**further note Column 3, Lines 24-28 of Williams**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7-10, 12-14, 16-17, 19, 22-26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho (U.S. Patent No. 6,622,307) in view of Williams (U.S. Patent No. 6,493,873).

Referring to claim 1, Ho discloses processing means for receiving broadcast signals and processing said received signals to generate processed analog signals (**see Figure 3 and Column 8, Lines 8-13 for converting received satellite broadcast signals from satellite 120 and processing the broadcast signals into processed analog signals**).

Ho also discloses receiving means for receiving a request signal from a device via a transmission medium connecting said apparatus and said device (**note that Ho teaches three different types of communication between said apparatus/MIRD 102 and said device/remote control system 150-152 (*power-line, RF wireless, and through an upstream channel of the cable used to transmit the television programming in the downstream direction*), wherein the embodiment of Figure 12 teaches transmitting a request signal through the upstream channel from the remote control system to the IRD (see *Column 14, Lines 47-51 and Column 15,***

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Liners 50-67)), wherein said processed analog signals are provided to said device via said transmission medium responsive to said request signal (**see Figure 3 and Column 8, Lines 13-31**), further wherein said request signal specifies a desired processed analog signal by identifying a program (**see again Column 14, Lines 47-51 and further note Column 8, Lines 37-44**).

Ho also discloses a control means for detecting an available frequency band on said transmission medium, wherein said available frequency band is used to provide said processed analog signals to said device (**see Column 9, Lines 12-26 and Lines 32-46 for providing the selected processed analog signals on the detected available frequency band**), thereby causing said transmission medium to be shared between said processed analog signals and cable broadcast signals distributed over said transmission medium (**see Column 9, Lines 32-46 for combining the processed analog signal inserted into the vacant frequency band along with off-air and cable TV programming and further note Column 8, Lines 14-18 for the antenna 135 providing the broadcasted cable television programming signals**).

Although Ho discloses detecting an available frequency band on said transmission medium, Ho does not describe the specific technique of how the available frequency band is detected and is therefore silent in teach dynamically detecting an available frequency on said transmission medium.

Williams discloses a system with multiple IRD devices (**elements 53-60 in Figure 3**) that are controlled by a control means 72 in Figure 3. Williams further discloses that the control means scans a plurality of frequency bands on said

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transmission medium to detect said available frequency bands to determine empty frequency spaces to insert television program received from satellite source 50-52 (**see Figure 3 and Column 11, Lines 40-67**). Therefore, since Williams discloses that the system automatically scans a plurality of frequency bands to locate an available frequency band, Williams teaches dynamically detecting an available frequency band on said transmission medium.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the MIRD unit, as taught by Ho, to utilize the automatic vacant channel scanning functionality, as taught by Williams, for the purpose of automating the vacant channel selection system, thereby preventing a video signal to be inserted into a predetermined set of assumed vacant channels, which may or may not already have a selected video signal being transmitted on the predetermined vacant channel by another user in a different room.

Referring to claim 3, Ho discloses that said broadcast signals are transmitted from a satellite source (**see Figure 3 and Column 8, Lines 8-13**).

Referring to claim 4, Ho discloses that said broadcast signals are transmitted from a digital terrestrial source (**see the rejection of claim 3 and note that the term digital terrestrial source is a broader term that encompasses a satellite source**).

Referring to claim 7, Ho discloses that said processing means comprises a front-end processing means for extracting desired digital transport stream from said received signals responsive to said request signal (**see microprocessor 153 in Figure 4A for selecting the signal requested by the user, which is indicated to the microprocessor 152 by signal decoder 178**).

Referring to claim 8, Ho discloses all of the limitations of claim 1, as well as a digital to analog converting means for converting said digital signals to analog baseband signals (**see NTSC encoder 172 in Figure 4A**).

Ho further discloses modulating means for modulating said analog baseband signals to generate said processed analog signals (**see RF Modulator 176 in Figure 4A**).

Ho fails to teach an encoding means for encoding said desired digital transport stream with error correction data to generate encoded digital signals.

Williams discloses that the IRD (**elements 53-60 in Figure 3**) contains an encoder 60 that further comprises an R-S encoder, which inserts error correction data (**see Column 14, Lines 2-9**).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the IRD, as taught by Ho, using the error correction data encoder, as taught by Williams, for the purpose of assuring that the signal transmitted from the video signal transmitter is properly received by the receiving device.

Referring to claim 9, Ho discloses that said receiving means comprises demodulating means for demodulating said request signal (**see signal decoder 178 in Figure 4A**).

Referring to claim 10, see the rejection of claim 1.

Referring to claim 12, see the rejection of claim 3.

Referring to claim 13, see the rejection of claim 4.

Referring to claim 14, see the rejection of claim 5.

Referring to claim 16, see the rejection of claim 8.

Referring to claim 17, see the rejection of claim 1 and note Figures 3 and 4A for the equivalent front-end processor, back-end processor and control means.

Referring to claim 19, Ho discloses all of the limitations of claim 17, but fails to teach further encoding the processed analog signals back into a digital transport stream to transmit to the multiple A/V processors (**TV/STB**).

The Examiner takes Official Notice to the fact that local video distribution systems can process analog signals back into a digital transport stream to be transmitted over a local area network to multiple TV/STB devices.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the signal combiner, as taught by Ho, to include a

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digital encoder to further encode the processed analog signals back into a digital transport stream, as taught by the Examiner's Official Notice, for the purpose of enabling the system to provide a greater number of channels that is a result from encoding more video channels into a digital transport stream as opposed to a single analog channel/frequency.

Referring to claim 20, see the rejection of claim 5.

Referring to claim 22, see the rejection of claims 1 and 7-8.

Referring to claim 23, see the rejection of claim 2.

Referring to claims 24-25, see the rejection of claims 3-4, respectively.

Referring to claim 26, see the rejection of claim 5.

Referring to claim 28, see the rejection of claims 1-2 and 6.

Referring to claim 29, see MIRD 102 in Figure 3, which is equivalent to the claimed gateway.

Referring to claim 30, see the rejection of claims 1 and 7-8.

Claims 2, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho (U.S. Patent No. 6,622,307) in view of Williams (U.S. Patent No. 6,493,873) in further view of Dinwiddie et al. (U.S. Patent No. 6,481,013).

Referring to claim 2, Ho and Williams discloses all of the limitations of claim 1, but only further teach the use of an RG-6 cable as the transmission medium and not an RG-59 cable (**see Ho**).

Dinwiddle discloses a similar system to Ho, where a local television distribution system uses existing cable running through a home to provide video signals (**see Figure 1**). Dinwiddle also discloses the use of RG-59 cable to transmit video within the local television distribution system (**see Column 5, Lines 32-49**), which was used in houses built in the 1970's and 1980's.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the RG-6 cable, as taught by Ho and Williams, and accommodate the use of RG-59 cable, as taught by Dinwiddle, for the purpose of allowing the system of Ho to be used in older houses built in the 1970's and 1980's, which already contain pre-existing RG-59 cable (**note Column 5, Lines 39-42 of Dinwiddle**).

Referring to claims 11 and 18, see the rejection of claim 2.

Claims 6, 15, 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho (U.S. Patent No. 6,622,307) in view of Williams (U.S. Patent No. 6,493,873) in further view of Ehreth (U.S. Patent No. 6,286,142).

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Referring to claim 6, Ho and Williams discloses all of the limitations of claim 1, but fail to teach that said control means detects said available frequency band based on a user input which selects said available frequency band.

Ehreth discloses a control means that detects said available frequency band based on a user input which selects said available frequency band (**see Column 4, Line 63 through Column 5, Line 5**).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the request transmitted from the client device, as taught by Ho, using the selectable upstream and downstream frequency band, as taught by Ehreth, for the purpose of ensuring that each remote site has an upstream frequency on which to transfer user input information and a separate downstream frequency on which to receive video signals (**see Column 5, Lines 26-29 of Ehreth**).

Referring to claims 15 and 21, see the rejection of claim 6.

Referring to claim 27, see the rejection of claim 6.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Salce whose telephone number is (571) 272-7301. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason P Salce/
Primary Examiner, Art Unit 2421

Jason P Salce
Primary Examiner
Art Unit 2421

May 2, 2011